What is claimed is:

1. An oxide thin film for a bolometer, a resistance of which changes dependently on a temperature change following incidence of infrared rays, comprising a cobalt-based oxide represented by $YBaCo_2O_{5.5+x}$ ($-0.5<x<0.05$).

2. The oxide thin film for the bolometer according to claim 1, wherein at least one part of the Y element in said cobalt-based oxide is replaced by at least one element selected from the group of Pr, Nd, Sm, Eu, Gd, Tb, Dy, and Ho, or at least one compound comprising at least one element selected from the same group.

3. The oxide thin film for the bolometer according to claim 1, wherein at least one part of the element Ba in said cobalt-based oxide is replaced by at least one element selected from the group of Sr and Ca, or at least one compound comprising at least one element selected from the same group.

4. The oxide thin film for the bolometer according to claim 1, wherein said cobalt-based oxide is formed on an insulating substrate, and said insulating substrate is composed of a thin layer of a perovskite oxide monocrystal.

5. A fabricating method of an oxide thin film comprising a cobalt-based oxide represented by $YBaCo_2O_{5.5+x}$ ($-0.5<x<0.05$) for a bolometer, wherein said method comprising the step of:

forming said oxide thin film on an insulating substrate using a sol-gel process.

6. A fabricating method of an oxide thin film comprising a cobalt-based oxide represented by $YBaCo_2O_{5.5+x}$ ($-0.5<x<0.05$) for a bolometer, wherein said method comprising the step of:

forming said oxide thin film on an insulating substrate

using a physical film-forming process.

7. A fabricating method of an oxide thin film comprising a cobalt-based oxide represented by $YBaCo_2O_{5.5+x}$ ($-0.5<x<0.05$) for a bolometer, wherein said method comprising the steps of:

applying onto an insulating substrate a solution in which an organic metal compound is dissolved in a solvent,

drying said applied solution on said insulating substrate, and

radiating a laser ray onto said solution so as to crystallize said solution.

8. An infrared sensor having an oxide thin film comprising a cobalt-based oxide represented by $YBaCo_2O_{5.5+x}$ ($-0.5<x<0.05$) used as a resistor member of a bolometer.

9. The infrared sensor according to claim 8, wherein at least one part of the Y element in said cobalt-based oxide is replaced by at least one element selected from the group of Pr, Nd, Sm, Eu, Gd, Tb, Dy, and Ho, or at least one compound comprising at least one element selected from the same group.

10. The infrared sensor according to claim 8, wherein at least one part of the element Ba in said cobalt-based oxide is replaced by at least one element selected from the group of Sr and Ca, or at least one compound comprising at least one element selected from the same group.

11. The infrared sensor according to claim 8, wherein said cobalt-based oxide is formed on an insulating substrate, and said insulating substrate is composed of a thin layer of a perovskite oxide monocrystal.

12. The infrared sensor according to claim 8, wherein said infrared sensor comprising a microbridge structure in

which said oxide thin film for said bolometer is thermally separated from a semiconductor substrate.